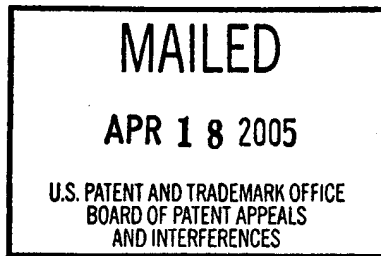


The opinion in support of the decision being entered today
was **not** written for publication and
is **not** binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HANNSJORG OBERMAIER



Appeal No. 2005-0324
Application No. 09/390,824

ON BRIEF

Before: THOMAS, DIXON and NAPPI, **Administrative Patent Judges.**

NAPPI, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 of the final rejection of
claims 1, 3 through 15, 17 through 19 and 23 through 30. For the reasons stated
infra, we will sustain the examiner's rejection of these claims.

Invention

The invention relates to a system for on-line replacement of cards in a computer system in which laterally installable cards are installed longitudinally through an opening in an external wall of a computer system chassis. See appellant's abstract.

Claim 1 is representative of the invention and a copy of the claim is appended to this decision.

References

The references relied upon by the examiner are:

Welsh	4,935,847	Jun. 19, 1990
Beak	5,496,185	Mar. 05, 1996
Cranston, III et al. (Cranston)	5,708,563	Jan. 13, 1998
Clements	5,963,681	Oct. 05, 1999
Moss	6,185,093	Feb. 06, 2001 (Filed Nov. 12, 1997)

Rejection at Issue

Claims 1, 3, 4, 6 through 9, 13, 14, 17 through 19 and 23 through 28 stand rejected under 35 U.S.C. § 103 as being obvious over Moss in view of Cranston. Claim 5 stands rejected under 35 U.S.C. § 103 as being obvious Moss in view of Cranston and Welsh. Claims 10, 12, 15, 29 and 30 stand rejected under 35 U.S.C. § 103 as being obvious over Moss in view of Cranston and Clements. Claim 11 stands rejected under 35 U.S.C. § 103 as being obvious over Moss in

Claim 11 stands rejected under 35 U.S.C. § 103 as being obvious over Moss in view of Cranston and Beak. Throughout the opinion we make reference to the briefs and the answer for the respective details thereof.

Opinion

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

With full consideration being given to the subject matter on appeal, the examiner's rejections and the arguments of appellant and the examiner, and for the reasons stated *infra* we will sustain the examiner's rejection of claims 1, 3 through 15, 17 through 19 and 23 through 30.

Grouping of the Claims

At the outset, we note that appellant states, on page 3 of the brief, that:

With regards to Issues (A) to (D), above, independent claims 1, 8, 13, 17, and dependent claims 3-7, 9-12, 14, 15, 18, 19 and 23-30 stand or fall together.

37 C.F.R. § 1.192(c) (7) (July 1, 2003) as amended at 62 Fed. Reg. 53196 (October 10, 1997), which was controlling at the time of appellant filing the brief, states:

For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and, in the argument under paragraph (c) (8) of this section, appellant explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

Accordingly, for the rejections based upon 35 U.S.C. § 103, we will group all the claims together and treat claim 1 as the representative claim.

Rejections under 35 U.S.C. § 103.

Appellant argues, on page 5 of the brief, that “[t]he Examiner fails to identify any explicit suggestion to combine the references. Instead, the Examiner asserts that it would have been obvious to combine the features of the disclosed devices, ‘to provide an external connection to the card.’” Further, the appellant argues that:

The central problem addressed by Moss is providing a device that protects and aligns an expansion card during insertion and removal of the card from a live chassis. The Moss device is configured to surround and protect the card rather than allow any external access to the card. Moss fails to provide any suggestion to combine the references.

Cranston III, et al. pertains only to a card cage that contains both a planar circuit board that includes a CPU (i.e. a motherboard), and various accessory boards that plug into the motherboard. The motherboard is the heart of the computer system, containing devices essential to the operation of the computer. The Cranston III, et al. device is not a card carrier assembly, but rather an insertable computer. Cranston III et al. fails to provide any suggestion to combine the references. (emphasis original, citations omitted).

Further, on page 3 of the reply brief, appellant argues:

More particularly, the Moss device is intended to create a connection to a live motherboard, whereas the Cranston III et al. device is effectively an insertable computer in and of itself. There is no suggestion in Cranston III et al. to arbitrarily use features from an insertable computer to augment an existing card carrier. Thus, when these references are considered as a whole, they fail to provide a suggestion to combine the cited references to form the claimed invention. The attempt to combine the features from these entirely distinct devices amounts to nothing more than hindsight reconstruction, picking and choosing among isolated disclosures in the prior art. (emphasis original).

In response to the appellant's arguments, the examiner states, on page 9 of the answer:

Cranston teaches the use of a bulkhead for providing an external connection means to electrically connect the circuit board to an external component (col. 4, lines 58-62). Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to use a card including a bulkhead in the device of Moss as taught by Cranston, to provide an external connection to the card.

We agree with the examiner and find that it would have been obvious to one of ordinary skill in the art to use a card with a bulkhead in the expansion card carrier of Moss. In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a ***prima facie*** case of obviousness. ***In re Oetiker***, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). ***See also In re Piasecki***, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). It is the burden of the examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by the implication contained in such

teachings or suggestions. *In re Sernaker* 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). “The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved.” *In re Huston* 308 F.3d 1267, 1278, 64 USPQ2d 1801, 1810 (Fed. Cir. 2002, citing *In re Kotzab* 217 F.3d 1365, 1370, 55 USPQ 1313, 1317 (Fed. Cir. 2000)).

We find that Moss teaches that prior methods of inserting expansion cards into a computer chassis required the chassis to be opened and the cards to be vertically inserted onto the motherboard. See column 1, line 9-15 and column 2, line 45-59. Moss teaches that an improvement to this method is to use an expansion card carrier, which is inserted into the chassis horizontally. See column 3, line 53 to 65, and figure 7 and 10. While we concur with appellant that Moss discloses one of the advantages of the horizontally inserted expansion card carrier is that it has the ability to replace cards in a live chassis, we do not find that this is the only problem to be solved. Moss also discloses that the problem with vertical insertion is that it is time consuming because it requires removal of the chassis cover.

Moss teaches that the system to horizontally insert cards can be used with PCI expansion cards. However, Moss does not teach how the PCI expansion cards are secured to the carrier. See Column 3, lines 11-15. We note that Moss does not define a PCI card, however appellant’s specification, on

identifies that one industry standard for expansion cards is Peripheral Component Interconnect (PCI). We find that a skilled artisan would recognize that in a computer system, many peripheral components, such as a printer, monitor, scanner, etc., are located outside of the computer chassis, as such PCI cards which interface with external components require an external connector. We note that figures 4, 6, 7, and 8 depict an aperture on the handle item 38 side of the card carrier. While, we do not find that the aperture teaches that there is an external connection, we consider that the aperture, in combination with the expansion circuit board of Cranston, as discussed *infra*, permits the external connection to the printed circuit board.

We find that Moss's statement "Additional means (not shown) may be used to secure the expansion card 28a in carrier 46 if deemed necessary" (column 3, lines 14-16) provides evidence that Moss anticipates that additional structure not depicted or described is associated with the card to card carrier connection.¹

We concur with appellant's assessment that Cranston teaches a computer with a card cage. We find that Cranston teaches that the circuit boards are vertically inserted into a board within the card cage. See Cranston

¹ We note that Moss's expression of the desirability of using additional means to secure the card and appellant's discussion of a typical installation of PCI cards, on page 2 of the specification, that "[n]ormally the card is held in place by the system connector, and by a screw that secures the bulkhead to the chassis" may also render the claim unpatentable. However, since we concur with the examiner's rejection, we do not enter a new grounds of rejection, as it would be cumulative to the examiner's rejection.

Figure 1 and column, 4 lines 51-52. We concur with the examiner's finding that circuit board, item 71, has an external connector, item 73, depicted in figure 4 as having a flat surface perpendicular to both the vertical circuit board and the riser circuit board, item 61. See Cranston, column 4, lines 58-63. We find that Cranston's external connector, item 73, meets appellant's claimed bulkhead.² As stated *supra* we find that a skilled artisan would recognize that PCI cards often have external connectors and that Moss teaches apertures in the card carriers. Further, we find that the skilled artisan would be motivated to use circuit cards such as those shown in Cranston, which have external connectors on a bulkhead. We note that as depicted in Cranston's figure 5 and Moss's figures 7 & 8, placing Cranston's circuit card into Moss's card carrier would result in the external connector, item 73, being adjacent the aperture in the handle of Moss's card carrier. Thus, we find that the examiner's rejection has set forth sufficient motivation to combine the references.

Further, we find additional motivation to combine the references in the nature of the problem to be solved. As stated *supra* the problem to be solved by Moss to make installing and removing expansion cards less time consuming by changing from a vertical insertion method which requires removal of the chassis

² The term bulkhead is discussed in appellant's specification, on page 2, as "the bulkheads of the cards are located on a side of a card that adjoins the lower edge. Thus, the bulkhead is oriented parallel to the direction of the card's insertion and extraction and orthogonal to the edge having the system connector."

cover to a horizontal insertion method. Cranston teaches a card cage, a chassis, in which the expansion cards are vertically inserted. Thus, we find that the nature of the problem to be solved in Moss is to change chassis in which expansion cards are vertically installed, such as the card cage of Cranston's device, to allow the cards to be horizontally inserted. Accordingly, we sustain the examiner's rejection of claims 1, 3, 4, 6 through 9, 13, 14 and 17 through 28 under 35 U.S.C. 103 as being unpatentable over Moss in view of Cranston.

Appellant has not presented additional arguments directed to the examiner's rejections of dependent claims 5, 10 through 12, 15, 29 and 30 under 35 U.S.C. 103. Accordingly, we sustain the examiner's rejections of these claims for the reasons stated *supra*.

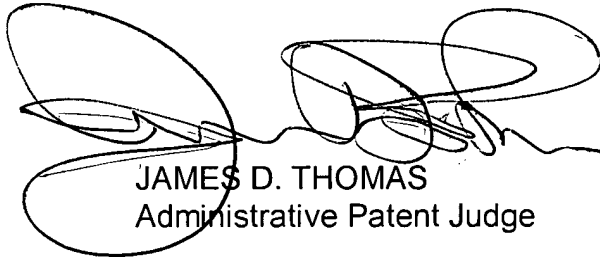


Only those arguments actually made by appellant have been considered in this decision. Arguments, which appellant could have made but chose not to make in the brief or by filing a reply brief have not been considered and are deemed waived by appellant [see 37 CFR § 41.37]. Support for this rule has been demonstrated by our reviewing court in ***In re Berger***, 279 F.3d 975, 984, 61 USPQ2d 1523, 1528-1529 (Fed. Cir. 2002) wherein the Federal Circuit stated that because the appellant did not contest the merits of the rejections in his brief to the Federal Circuit, the issue is waived. ***See also In re Watts***, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1458 (Fed. Cir. 2004).

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In summary, we have sustained the examiner's rejection of claims 1, 3 through 15, 17 through 19 and 23 through 30 under 35 USC § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a) (1) (iv).

AFFIRMED


JAMES D. THOMAS
Administrative Patent Judge)
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JOSEPH L. DIXON
Administrative Patent Judge)
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)

ROBERT E. NAPPI
Administrative Patent Judge)
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BOARD OF PATENT
APPEALS AND
INTERFERENCES

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APPENDIX
Claim 1

1. A carrier for connecting a planar printed circuit board card to a chassis, wherein the card has a bulkhead and a lower edge including a card system connector, wherein the chassis defines an opening for receiving a card, and wherein the chassis includes a chassis system connector to be placed in communication with the card system connector of the received card, the chassis system connector and opening defining a carrier-insertion direction, comprising:

a planar body having a front end and a rear end;

a first system connector carried on the body and configured to mate and communicate with the card system connector in a card-insertion direction such that the plane of the printed circuit board card is parallel to the plane of the body; and

a second system connector carried on the body and configured to mate and communicate with the chassis system connector, wherein the second system connector is in communication with the first system connector;

wherein the first and second system connectors are configured such that the card-insertion direction differs from the carrier-insertion direction;

wherein the body and the first and second system connectors are configured such that, with the card system connector mated to the first system connector, the second system connector fits insertably through the opening in the chassis-insertion direction to mate with the chassis system connector; and

wherein the body and first system connector are configured such that the card bulkhead would be approximately coplanar with the chassis opening when the card system connector is mated with the first system connector and the second system connector is mated with the chassis system connector.

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